Embolization of the Thoracic Duct Utilizing Only Liquid Embolic Agent

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Disclosure

Speaker name: Umair Munawar

I have the following potential conflicts of interest to report:

☐ Consulting
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☐ Other(s)

☒ I do not have any potential conflict of interest
Introduction

• Chylothorax
  • Extravasation of lymph into the thoracic cavity
  • Leads to dyspnea, cough, and chest pain

• Various treatment methods
  • The most effective being thoracic duct embolization with coils and glue just proximal to the leak
  • Supported by studies demonstrating better patient outcomes when glue and coils are used together such that the coil serves as a scaffold for glue polymerization

• This report presents two cases where liquid-only embolization using Truefill® (Cordis, Miami Lakes, Florida) was used as an alternative method to treat chylothorax with attention to patient outcomes
Case 1

- 68yo M with PMH right middle lobectomy complicated by high-output chyle leak s/p thoracotomy with decortication, thoracic duct ligation, and PleurX catheter placement

- Bilateral inguinal lymphangiography showed contrast ascending through lymphatic channels (A)
Case 1

- The cisterna chyli was accessed with contrast extravasation into the right chest consistent with a right-sided chyle leak (B)

- A 0.014 Rubicon catheter was advanced into the duct. A large amount of n-butyl cyanoacrylate Truefill® glue was injected (C)

- No immediate complications, CXR on POD 6 was negative, and pt was discharged

- At 7-month follow-up, the patient was asymptomatic. Chest radiograph was negative for recurrent effusion
Case 2

- 57yo M with PMH chylous effusion and ascites
- Bilateral inguinal lymph nodes were accessed and injected with lipiodol until contrast seen in the cisterna chyli
- Cisterna chyli was accessed with a needle and exchanged for a Quick-Cross catheter. Injection confirmed small extravasation from cisterna chyli and thoracic duct (A, C)
- Embolization performed with n-butyl cyanoacrylate, which opacified across the thoracic duct leak into the cisterna chyli (B)
- No complication or recurrence was observed in the post-procedural period
Conclusions

• Thoracic duct embolization is an effective method of treating chylothorax.

• Current recommendations recommend coil and glue embolization techniques. We present two cases of successful liquid-only thoracic duct embolization, suggesting a possible safe and effective alternative for coil and glue combination methods.

• Further comparative research is needed to measure long-term outcomes and complications.
References

